

# Production of RPP

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November, 2010**

## Released in June 2009

- **Fully consistent web update**  
of new measurements:
  - Listings
  - Summary Tables
  - Conservation Laws

(Only Listings updated in off year, up to now)

- **June** - **book** files to publisher
- **July** - **web** edition
- Early **August** - **booklet** files to publisher

**Thanks to all PDG Collaborators for the effort**

- **RPP Book**                   **1,422 p. ( + 6.1% )**
  - General Reviews    302 p. ( +12.7% )
  - Summaries               70 p. ( + 5.7% )
  - Listings (+)           1002 p. ( + 4.4% )
- **Data Booklet**              **306 p. ( + 4.0% )**
  - Increase in summaries only
- **Web edition**

- 551 new papers with data
- 2,158 new measurements
- 108 reviews (mostly revised/new)

## Encoding rescaled/product type values

- Branching fraction from **any measurement combination** can be encoded to dynamically adjust with the current best values

$\text{BR}(\text{report}) * \text{BR}(\text{known}) = M$  (measurement)

Encoding  $\text{BR}(\text{report})$ :

`br_adjust: M; *, ..., Location[BR(known)]`

**br\_adjust: 0.211+-0.030 +- 0.014 E-5;**  
**\*, ADJUST, M049 1**

$\Gamma(\Upsilon(1S)\pi^+\pi^-)/\Gamma_{\text{total}}$	$\Gamma_{17}/\Gamma$				
VALUE (units $10^{-5}$ )	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<b><math>8.1 \pm 0.6</math> OUR AVERAGE</b>					
$8.5 \pm 1.3 \pm 0.2$	$113 \pm 16$	$^{19}$ SOKOLOV 09	BELL	$e^+ e^- \rightarrow \pi^+ \pi^- \mu^+ \mu^-$	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<12	90	GLENN	99	CLE2	$e^+ e^-$
$^{19}$ SOKOLOV 09 reports $[\Gamma(\Upsilon(4S) \rightarrow \Upsilon(1S)\pi^+\pi^-)/\Gamma_{\text{total}}] \times [B(\Upsilon(1S) \rightarrow \mu^+ \mu^-)] = (0.211 \pm 0.030 \pm 0.014) \times 10^{-5}$ which we divide by our best value $B(\Upsilon(1S) \rightarrow \mu^+ \mu^-) = (2.48 \pm 0.05) \times 10^{-2}$ . Our first error is their experiment's error and our second error is the systematic error from using our best value.					

**br\_adjust: 5.1 +0.5 +0.6 E-4;**  
**\*, 9.33 +0.14 +0.61 E-2, M071 59**

$\Gamma(\eta\eta)/\Gamma_{\text{total}}$	$\Gamma_{23}/\Gamma$			
VALUE (units $10^{-4}$ )	EVTS	DOCUMENT ID	TECN	COMMENT
<b>5.4±0.7±0.2</b>	156± 14	35 ASNER	09 CLEO	$\psi(2S) \rightarrow \gamma\eta\eta$

<sup>35</sup> ASNER 09 reports  $(5.1 \pm 0.5 \pm 0.6) \times 10^{-4}$  from a measurement of  $[\Gamma(\chi_{c2}(1P) \rightarrow \eta\eta)/\Gamma_{\text{total}}] \times [\mathcal{B}(\psi(2S) \rightarrow \gamma\chi_{c2}(1P))]$  assuming  $\mathcal{B}(\psi(2S) \rightarrow \gamma\chi_{c2}(1P)) = (9.33 \pm 0.14 \pm 0.61) \times 10^{-2}$ , which we rescale to our best value  $\mathcal{B}(\psi(2S) \rightarrow \gamma\chi_{c2}(1P)) = (8.74 \pm 0.35) \times 10^{-2}$ . Our first error is their experiment's error and our second error is the systematic error from using our best value.

- The latest source TeX files of the reviews are posted online.
- Please **start with the posted version when revising a review.**

Name/Further Explanation	tar file	PS	Comments
<a href="#">Accelerator Physics of Colliders</a>	<a href="#">accel.tar</a>	<a href="#">accel.ps</a>	April 10, 2009
<a href="#">Big-Bang Cosmology</a>	<a href="#">bigbang.tar</a>	<a href="#">bigbang.ps</a>	April 10, 2009
<a href="#">Big-Bang Nucleosynthesis</a>	<a href="#">bigbangnuc.tar</a>	<a href="#">bigbangnuc.ps</a>	April 13, 2009
<a href="#">CKM quark-mixing matrix</a>	<a href="#">kmmix.tar</a>	<a href="#">kmmix.ps</a>	June 09, 2009
<a href="#">Commonly Used Radioactive Sources</a>	<a href="#">sources.tar</a>	<a href="#">sources.ps</a>	
<a href="#">Cosmic Microwave Background</a>	<a href="#">microwave.tar</a>	<a href="#">microwave.p</a>	
<a href="#">Cosmic Rays</a>	<a href="#">cosmicray.tar</a>	<a href="#">cosmicray.ps</a>	
<a href="#">Cosmological Parameters, The</a>	<a href="#">hubble.tar</a>	<a href="#">hubble.ps</a>	
<a href="#">CP violation</a>	<a href="#">cpviol.tar</a>	<a href="#">cpviol.ps</a>	
<a href="#">Cross-section formulae for specific processes</a>	<a href="#">crosssec.tar</a>	<a href="#">crosssec.ps</a>	
<a href="#">Dark matter</a>	<a href="#">darkmat.tar</a>	<a href="#">darkmat.ps</a>	
<a href="#">Electroweak model and constraints on new physics</a>	<a href="#">stanmodel.tar</a>	<a href="#">stanmodel.ps</a>	
<a href="#">Experimental Tests of Gravitational Theory</a>	<a href="#">grav.tar</a>	<a href="#">grav.ps</a>	
<a href="#">Fragmentation functions in e+ e- annihilation and DIS</a>	<a href="#">frag.tar</a>	<a href="#">frag.ps</a>	
<a href="#">Grand Unified Theories</a>	<a href="#">guts.tar</a>	<a href="#">guts.ps</a>	
<a href="#">Kinematics</a>	<a href="#">kinema.tar</a>	<a href="#">kinema.ps</a>	

## CKM quark-mixing matrix

- Retrieve [kmmix.tar](#)
- tar -xvf kmmix.tar
- cd kmmix
- tex kmmix.tex; tex kmmix.tex
- dvips -t letter kmmix.dvi -o kmmix.ps
- Files to edit:
 

<a href="#">kmmix.tex</a>	The body of the section -- most editing done here
<a href="#">kmmix.allref</a>	All references for this section
<a href="#">kmmix.def</a>	Local definitions
- Any figures are included in the tar file in a subdirectory figures/
- [kmmix-web.ps](#) --> PS file corresponding to included files
- FYI: TeXsis and RPP macros are in file mtexsis-rpp.tex